

County, Florida. Destruction and alternation of tropical hardwood hammock forest, to which both species are restricted, is a threat to their continued existence. Both were listed as endangered by an emergency rule on September 21, 1983, but that rule expired on May 18, 1984. This final rule restores the protection of the Endangered Species Act of 1973, as amended.

DATES: The effective date of this rule is August 31, 1984 because the Service considers that the period between the expiration of the emergency rule covering the Key Largo woodrat and cotton mouse, and the implementation of this permanent final rule, should be as brief as possible because of the threats facing these species.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours (7:00 a.m.—4:30 p.m.) at the Service's Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207.

FOR FURTHER INFORMATION CONTACT: Mr. David J. Wesley, Endangered

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Key Largo Woodrat and Key Largo Cotton Mouse

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines endangered status for the Key Largo woodrat and cotton mouse, two small mammals native to Key Largo, Monroe

Species Field Supervisor, at the above address (904/791-2580 or FTS 946-2580).

SUPPLEMENTARY INFORMATION:

Background

The Key Largo woodrat (*Neotoma floridana smalli*) was described by Sherman (1955). It is a small mammal, just over a foot in length including the haired tail, and the overall coloration is gray-brown above and white below. It is the southernmost subspecies of woodrat in the U.S., and is separated by a 150-mile gap from other Florida woodrat (*N. f. floridana*) populations. The Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) was described by Schwartz (1952). It is about half as long as the woodrat, and its coloration is reddish brown above and white below. Both the woodrat and cotton mouse are endemic to Key Largo, Monroe County, Florida, and originally occurred throughout the hardwood hammocks on this Key, but have disappeared from most of their original range. Both species were introduced to Lignumvitae Key, Monroe County, Florida, in 1970. The woodrat may have reached the carrying capacity of the available habitat on this 90-hectare (220-acre) key, a State botanical site, but the status of the cotton mouse there is unknown. The Florida Department of Parks and Recreation had considered relocating the woodrat and cotton mouse from Lignumvitae Key, because neither species is native there. No such translocation efforts are presently planned, however.

The upland areas that the woodrat and cotton mouse inhabit on north Key Largo reach an elevation of about 4 meters (13 feet). The uplands support a rich biota, including many rare plant species. The climax vegetation type is a hardwood hammock forest with close floristic affinities to the West Indies. The hammocks are restricted to upland areas because they do not tolerate the intrusion of salt water in the tidal lowland areas.

Species associated with the north Key Largo hammocks include the Schaus swallowtail butterfly (*Papilio aristodemus ponceanus*), federally threatened; and several Florida State-listed plant species: tamarindillo (*Acacia choriophylla*), powdery catopsis (*Catopsis berteroniana*), prickly apple (*Cereus gracilis* var. *simpsonii*), a cactus which the Service presently has under review (48 FR 53647, November 28, 1983) for possible listing as endangered or threatened, silver palm (*Coccothrinax argentata*) lignum-vitae (*Guaiaacum sanctum*), inkwood (*Hypelate trifoliata*), mahogany mistletoe (*Phoradendron*

rubrum), and brittle thatch palm (*Thrinax microcarpa*).

Tropical hardwood hammocks develop a closed canopy when they are mature, providing a more moderate, humid environment than the surrounding habitats. The Key Largo woodrat and cotton mouse are restricted to these hammocks. Tropical hardwood hammocks were originally found from Key West northward into the southern peninsula of Florida. Many of the hardwood hammocks on the peninsula, however, have been destroyed due to human activities. This habitat is one of the most limited and threatened ecosystems in Florida. The hammocks on north Key Largo represent some of the largest remaining tracts of this vegetation type. Based on work carried out on Key Largo from 1968 to 1973, Brown (1978) reported that the Key Largo woodrat had been extirpated by fires and development from the southern two-thirds of Key Largo.

Hersh (1981) studied the ecology of the woodrat on north Key Largo. Woodrat densities on a 5.25-hectare (13-acre) study area varied between 2 and 2.5 woodrats per hectare (0.8-1.0 woodrat per acre). Mean home range was 0.2368 hectares (0.6 acre). Each woodrat used several stick nests (about 5.6 nests per woodrat). Woodrats fed on leaves, buds, seeds, and flowers of a variety of plants.

Based on studies carried out on north Key Largo from January to August of 1979, Barbour and Humphrey (1982) found that the woodrat and cotton mouse were most abundant in mature hammocks and were rare or absent in young or recovering hammocks. Cotton mouse density was estimated to be 21.8 mice per hectare (8.8 per acre) in mature forest, but only 1.2 per hectare (0.5 per acre) in successional forest. About 463 hectares (1144 acres) on north Key Largo were occupied by woodrats. Stick nests were absent from two hammocks surveyed southwest of the U.S. 1-State Route 905 intersection. The total woodrat population on north Key Largo was estimated to be 654; the introduced population on Lignumvitae Key was estimated to be 85.

On May 19, 1980, Dr. Stephen R. Humphrey of the Florida State Museum, Gainesville, Florida, petitioned the Service to add the Key Largo woodrat and cotton mouse to the U.S. List of Endangered and Threatened Wildlife, pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The petition included a status report prepared under contract to the Florida Game and Fresh Water Fish Commission. Portions of the report were

recently published (Barbour and Humphrey 1982). In the Federal Register of July 28, 1980 (45 FR 49961-49962), the Service published a notice of petition acceptance and status review, and announced its intention to propose listing the two Key Largo rodents. In the Federal Register of December 30, 1982 (47 FR 58454-58460), these two mammals were included in category 1 of the Service's Review of Vertebrate Wildlife, meaning that there was sufficient information on hand to support the biological appropriateness of a listing proposal. In the Federal Register of September 21, 1983 (48 FR 43040-43043), the Service issued an emergency rule listing both species as endangered (for details, see below under "Available Conservation Measures"). The emergency rule expired on May 18, 1984. In the Federal Register of February 9, 1984 (49 FR 4951-4956), the Service published a proposed permanent determination of endangered status and critical habitat for the two species.

Summary of Comments and Recommendations

In the proposed rule of February 9, 1984, and associated notifications, all interested parties were requested to submit information that might contribute to the development of a final rule. Appropriate State and Federal agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices, inviting public comment, were published in the *Miami Herald* on February 29, 1984, the *Marathon Keynoter* on March 1, 1984, and the *Key West Citizen* on March 2, 1984. On March 12, 1984, the Service received a request for a public hearing on the proposal. The hearing was held on April 24, 1984, in the Plantation Key Courthouse, Monroe County, Florida.

During the comment period, 62 comments were received. The hearing was attended by 118 persons; 33 individuals made oral statements, and 12 written statements were handed in. Official comment was received from the Florida Game and Fresh Water Fish Commission, which supported the proposal.

A large number of comments or oral statements either supported or opposed listing these species, but provided no substantive data. Support for the listing proposal was voiced by six environmental organizations. Opposition was generally received from landowners, attorneys representing landowners, realtors, and businesses. One individual also presented a petition

signed by 157 persons opposing the proposal.

The opposing comments received can be placed in a number of general groups, depending on content. These categories of comments, and the Service response to each, are listed below.

1. The Key Largo woodrat and/or cotton mouse should not receive the protection of the Endangered Species Act because rodents are pest species and have no intrinsic value to mankind. Some persons stated that Key Largo woodrats had invaded their homes.

Service response. Any species of native wildlife or plant (except a pest insect) is eligible, under the appropriate circumstances, for the protection of the Endangered Species Act. Economic value to mankind is not a factor that the Service may consider in determining whether to list endangered or threatened species. The Key Largo woodrat and cotton mouse are native rodents that generally avoid contact with humans. They have not been implicated in spreading disease to humans. The comments referring to rat problems appear to involve the black rat (*Rattus rattus*), an introduced pest species that is common in and around human dwellings in the Keys. The black rat also occurs in hardwood hammocks on north Key Largo (Hersh, 1981). The Service has no documented evidence of woodrats invading human dwellings.

2. Sufficient habitat for the conservation of the Key Largo woodrat and cotton mouse is included within areas scheduled for acquisition by the Federal (U.S. Fish and Wildlife Service) or Florida State (Department of Natural Resources) governments.

Service response. The Key Largo woodrat and cotton mouse have already disappeared from most of their original range. The scheduled acquisitions, if completed, would improve the potential for conserving the surviving populations, but would not eliminate the danger of extinction. As proposed, these acquisitions would include about 630 acres of hardwood hammocks supporting an estimated 318 woodrats, 49 percent of the total population of 654 woodrats estimated by Barbour and Humphrey (1982) for north Key Largo. At this time, acquisition of less than 150 acres of hammock has taken place. Fifty-one percent of the estimated total woodrat population on north Key Largo (336 woodrats) occurs in areas outside the proposed acquisition projects. These areas represent most of the highest density populations of the woodrat. Similar population percentages presumably apply to the cotton mouse. Although populations of both species would probably reach higher densities

in the acquisition areas as hardwood hammocks matured, the most favorable habitat is now outside the acquisition projects.

Two commenters noted that Brown (1978) suggested that preservation of a few hundred acres of climax tropical hammock on north Key Largo would be sufficient to save the Key Largo woodrat and cotton mouse, and that, failing this, introduction of both species could be made to Old Rhodes Key or Elliott Key in Key Biscayne National Park. The Service believes that more than a few hundred acres of hardwood hammock would be required for the long-term survival and recovery of the Key Largo woodrat and cotton mouse.

Transplanting is discussed below under "3." Although the Service provided part of the funding for the publication in which Dr. Brown's species accounts and recommendations appeared (See "Literature Cited," below), the contributors to the publication did not represent the Service or its policies, and the Service is not in any way restricted to the conservation recommendations made in the publication.

3. The Lignumvitae Key State Botanical Site, as well as potential introduction sites in Key Biscayne National Park (or elsewhere in the Florida Keys) could provide adequate habitat for the conservation of the Key Largo woodrat and cotton mouse, negating the need to list them.

Service response. The seemingly successful introduction of the Key Largo woodrat onto Lignumvitae Key indicates that this species might be able to colonize other hardwood hammocks in the upper Florida Keys. The principal hardwood hammocks remaining in the upper Keys, other than those on north Key Largo, are those of Key Biscayne National Park in Dade County. However, while transplantation to these areas may be a supplementary means of helping the species to survive, the Service must also act to preserve the ability of the species to exist in its current range. One of the primary purposes of the Endangered Species Act is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved (16 U.S.C. 1531(b)). In accordance with this purpose, the Service's policy is to attempt to conserve and recover endangered and threatened species within their known historic ranges. While transplantation of species may be a valuable conservation measure, it is not an acceptable procedure to preclude listing. Furthermore, any Service recovery efforts for these species could only take place if they were listed. Regardless of

the merit of any transplantation proposals, the Service can commit Endangered Species Act funding and manpower only for the recovery of listed species. After a species is listed, the Service prepares a recovery plan; recovery activities could include, but would not ordinarily be restricted to, transplantation.

4. The Key Largo woodrat and cotton mouse are adequately protected by existing local, State, and Federal regulations (namely, designation of the Florida Keys as an Area of Critical State Concern, regulations affecting dredge and fill activities, customer service policies of the Florida Keys Aqueduct Authority, the Monroe County Land Clearing Ordinance, and rules in the Florida Administrative Code affecting John Pennekamp Coral Reef State Park).

Service response. Proposed principles for guiding development for the Florida Keys Area of Critical State Concern (Florida Statute § 380.0552) contain provisions for the protection of upland resources. The proposed principles, if adopted and rigorously enforced, would apparently provide considerable protection to hardwood hammocks. Designation of federally endangered and threatened species would aid in the recognition and preservation of such areas, however, and would not duplicate the development guidelines. The Service cannot at the present time predict what the final form of the principles for guiding development will be or assess the effectiveness of their enforcement. The Service cannot depend on these proposals to adequately protect the rodents. The Service does not believe the regulations affecting dredge and fill activities and John Pennekamp State Park provide any specific protection to the upland hardwood hammocks on north Key Largo. While the establishment of new access channels and marinas would increase the value of properties now lacking water access, the lack of such access does not mean these areas will be impractical to develop. Many "landlocked" properties on Key Largo have been intensively developed. The policies of the Florida Keys Aqueduct Authority, contrary to one comment received, do not exclude water delivery to all the hardwood hammocks of the Keys, but only to selected areas. The areas denied delivery on north Key Largo are nearly all within proposed Federal or State acquisition projects, mainly west of State Route 905. None of the above-mentioned regulations, either individually or in concert, duplicate the protection afforded endangered or threatened species by the Endangered Species Act.

5. The Key Largo woodrat and cotton mouse are not valid species or subspecies and are not native to Key Largo; they are, therefore, ineligible for the protection of the Endangered Species Act. Mr. Alan B. Maxwell, of Sea Critters, Inc., submitted that the Key Largo woodrat and cotton mouse were not valid subspecies because the woodrat could only be differentiated from mainland Florida populations by an internal (skull) character, and the cotton mouse was characterized by a trait (red pelage) also expressed to a lesser degree by cotton mice (*Peromyscus gossypinus palmarius*) from the southeastern Florida mainland. Mr. Maxwell indicated direct contact had taken place between the Key Largo cotton mouse and mainland forms of this species. He further stated that electrophoretic or immunological studies might confirm whether or not the Key Largo woodrat or cotton mouse are true subspecies. Mr. Maxwell also suggested that these species could be reared in captivity in any numbers desired and their survivability could be improved by hybridizing them with cotton mice and woodrats from mainland Florida.

Service response. The characters used to distinguish the Key Largo woodrat and cotton mouse are typical of anatomical features used in rodent taxonomy to recognize species or subspecies. While additional electrophoretic or immunological data might aid in understanding taxonomic relationships in these species, such data would not provide a definitive decision on whether or not the Key Largo woodrat and cotton mouse should be considered distinct subspecies. Though present-day contact between the Key Largo cotton mouse and mainland cotton mice is unlikely, the Key Largo cotton mouse was probably derived from the nearby mainland populations. Subspecies generally share many morphological characters, and intergrades between subspecies often cannot be identified to the subspecific level. This is the inevitable result of the fact that conspecific subspecies usually interbreed in areas of contact. While captive breeding is a possible Service recovery action, it is not a substitute for maintenance of sufficient populations of the species of concern in natural habitats. With regard to hybridization, it is against Service policy to hybridize listed species with other listed or nonlisted species (or subspecies). The Service has concluded that such hybridization can harm the chances of a species' survival and is not an acceptable conservation measure under the Endangered Species Act.

6. Dr. Earl R. Rich, a biologist retained by attorneys representing several landowners, proposed that the Key Largo woodrat was introduced to Key Largo by coastal trading vessels in the early part of the twentieth century, and that the introduced woodrat population was derived from north Florida, Georgia, or South Carolina populations of *Neotoma floridana floridana*. Dr. Rich concluded that morphometric study of coastal plain populations of *N. f. floridana* would be likely to show these populations to be more closely related to the Key Largo woodrat than are peninsular Florida populations.

Service response. The Florida Keys support many endemic mammal species or subspecies that are derived from mainland populations, but that diverged on the Keys. There is no evidence to suggest that woodrats did not colonize the Florida Keys in the same manner as the rest of the terrestrial vertebrate fauna there. Unlike the introduced black and Norway rats, woodrats are not human commensals and are not likely stowaways on ships. Sherman (1955) did examine some specimens of *Neotoma floridana* from the coastal plain of north Florida (New Berlin, Duval County), and they were less similar to the Key Largo woodrat than were some of the specimens taken farther to the south on the mainland peninsula (Gainesville and Gulf Hammock).

7. The Key Largo woodrat and cotton mouse are not qualified for the protection of the Endangered Species Act because they are not in danger of extinction throughout all or a significant portion of their range.

Service response. The Key Largo woodrat and cotton mouse have been largely or completely extirpated from their former range on Key Largo south of the U.S. 1—State Route 905 intersection. The Service's evaluation of potential future habitat destruction and development is discussed below under "Factors Affecting the Species."

8. Development is not imminent on north Key Largo; therefore there is no immediate need to list these species.

Service response. The Service agrees that imminent development appears less likely now than at the time it was petitioned to list these species. This is due to proposed Federal and State acquisition, a moratorium on the acceptance of new major development proposals in Monroe County, and Florida Keys Aqueduct Authority hookup policy. A slowdown in the demand for residential units on Key Largo has also apparently made immediate development less likely. Nonetheless, several projects have

preliminary or final approval or are under construction in areas near to or within habitat of the Key Largo woodrat and cotton mouse. The Service assumes that in the foreseeable future north Key Largo will continue to be an area subject to development pressures. The final constraints on development in the area will depend on the Monroe County Land Use Plan, currently under revision. Additional details on development activities on north Key Largo and the need for Federal protection of these species are discussed below under "Summary of Factors Affecting the Species" and "Available Conservation Measures."

9. Development design and management criteria, rather than limiting the availability of utilities, would be a useful approach in minimizing impacts on the Key Largo woodrat and cotton mouse. The South Florida Regional Planning Council suggested that an example of this approach was the development order issued with respect to the Port Bougainville Development on north Key Largo.

Service response. The Service agrees that design of developments and management requirements could reduce the effects of development on the hardwood hammocks on which the Key Largo woodrat and cotton mouse depend. However, the Endangered Species Act does not give the Service any jurisdiction over such local or State planning. The Service's involvement is generally through Section 7 of the Endangered Species Act, affecting only Federal agencies. Federal participation, for example funding, often takes place long before specific development planning is carried out. After the Federal action has taken place, the Service would have no further jurisdiction over specific planning or management requirements for any development.

10. The Key Largo woodrat and cotton mouse occur much more widely in Monroe County, and therefore should not be listed.

Service response. Three comments indicated that woodrats occurred in areas from which they were not reported by Barbour and Humphrey (1982). These sites, each involving a few nests, were near or adjacent to occupied habitat documented by Barbour and Humphrey. No significant range extensions have been reported for either the Key Largo woodrat or cotton mouse.

11. The proposal of the Key Largo woodrat and cotton mouse as endangered species, with critical habitat, is a hasty bureaucratic measure. Insufficient time was available to allow

the presentation of additional scientific data.

Service response. All notification requirements of the Endangered Species Act regarding comment periods and hearings were met during the proposal of these species (see beginning of "Summary of Comments and Recommendations," above). Extensive notifications were also made following the emergency listing of September 21, 1983. The Service recognizes that the Key Largo woodrat and cotton mouse are not well known biologically, but such is often true of endangered and threatened species. Section 4(b)(1)(A) of the Endangered Species Act requires that listing decisions be made on the basis of the best available scientific and commercial data. Recovery measures may well include research on the ecology, distribution, and population dynamics of these species. The present scientific data available for the Key Largo woodrat and cotton mouse, however, indicate that they are endangered, in accordance with the five factors specified in section 4(a)(1) of the Act. This determination accords with the State of Florida, whose Game and Fresh Water Fish Commission has recognized these species as endangered.

12. Several comments specifically addressed the shape and size of the critical habitat for these species, or addressed potential economic effects of designating critical habitat.

Service response. These comments will be considered in a final regulation designating critical habitat for the Key Largo woodrat and cotton mouse (see "Critical Habitat," below).

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Key Largo woodrat and the Key Largo cotton mouse should be classified as endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate the 1982 Amendments to the Act—see proposal at 48 FR 36062, August 8, 1983) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Key Largo woodrat (*Neotoma floridana smalli*) and the Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. The Key Largo woodrat and cotton mouse formerly occurred throughout the hardwood hammock forests of Key Largo, Monroe County, Florida (Schwartz, 1952; Sherman, 1955; Brown, 1978). These species are presently restricted to the northern portion of Key Largo, except for an introduced population of the woodrat (and possibly the cotton mouse) on Lignumvitae Key, Monroe County (Barbour and Humphrey, 1982). The area of Key Largo north of the U.S. 1—State Route intersection—is the site of the following ongoing or approved residential projects: under construction, Port Bougainville—2,806 units, Largo Beach and Tennis Club, 224 units; preliminary approval, Anchor Bay—159 units, Nichols Subdivision—22 units, Garden Cove—366 units; final approval, Carysfort Yacht Club—512 units (Status of Major Development Projects in Monroe County, Florida, Department of Community Affairs report, January 20, 1984). Approximately one-half of the Key Largo woodrat and cotton mouse habitat is contained in proposed Federal and State land acquisition projects, but only a small proportion of these areas has yet been acquired. If these acquisitions were completed, about 50 percent of Key Largo woodrat and cotton mouse populations would be protected. This would include only about 318 woodrats, however, based on the estimates of density provided by Barbour and Humphrey (1982). Most of the mature Key Largo hammocks with the highest woodrat and cotton mouse densities lie outside the proposed acquisition boundaries. The future of these areas will depend on planning decisions of Monroe County and the State of Florida, as well as the demand for residential and commercial development on north Key Largo. The Service believes that north Key Largo will continue to be an attractive area for residential development, even if such development is slowed by the present major development proposal moratorium, by current economic conditions, and by more restrictive local or State regulations.

B. Overutilization for commercial, recreational, scientific, or educational purposes. Not now known to be applicable.

C. Disease or predation. Not now known to be applicable.

D. The inadequacy of existing regulatory mechanisms. The proposed Federal and State acquisition projects on north Key Largo would provide protection to an estimated one-half of

the surviving Key Largo woodrat and cotton mouse populations. Only a small proportion of the proposed upland area has yet been acquired. Many of the acquisition areas are also denied access to fresh water by the customer service policies of the Florida Keys Aqueduct Authority (Sections 7.01 and 7.02). The principal protection for hardwood hammocks outside the proposed acquisition areas derives from section 18-23 of the Monroe County Code, which requires protection of tropical hardwood hammock communities to the maximum extent possible in the course of land clearing. The past application and enforcement of this ordinance has been largely ineffective in preserving hammocks, although individual trees may be saved. A proposed amendment of § 380.0552 of the Florida Statutes, Florida Keys Area as an Area of Critical State Concern, may, if adopted, increase the amount of protection given hardwood hammocks in the Keys. Permits for clearing small areas of hammock continue to be given by Monroe County, however. No existing regulations duplicate the protective recovery provisions of the Endangered Species Act, as amended. The Act will impose conservation requirements on Federal agencies carrying out activities on north Key Largo, and requires the Service to develop a recovery plan for the Key Largo woodrat and cotton mouse (see "Available Conservation Measures"). The Key Largo woodrat and cotton mouse are considered endangered by the State of Florida (Administrative Code Chapter 39-27.01) but this statute does not protect the habitat of these species.

E. Other natural or manmade factors effecting its continued existence. The Key Largo woodrat may be at the carrying capacity of the available habitat on Lignumvitae Key. The status of the cotton mouse on this Key is unknown. The apparent extirpation of the Key Largo woodrat and cotton mouse from the southern portion of Key Largo indicates that these species are not tolerant of fragmented, highly disturbed hammocks.

The decision to determine endangered status for the Key Largo woodrat and cotton mouse was based on an assessment of the best available scientific information and of past, present, and probable future threats to these species. Because of the need to promptly publish these determinations no determination of critical habitat can be made at this time. A decision to determine only threatened status would not be justified given the current low population levels, restricted range, and

potential jeopardy from habitat destruction of the Key Largo woodrat and cotton mouse. A decision to take no action would exclude both species from needed protection pursuant to the Endangered Species Act. Therefore, no action or listing as threatened would be contrary to the Act's intent.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that "critical habitat" be designated, "to the maximum extent prudent and determinable," concurrent with the determination that a species is endangered or threatened. Section 4(b)(6)(C) further indicates that a concurrent critical habitat determination is not required if the Service finds that a prompt determination of endangered or threatened status is essential to the conservation of the involved species.

In the case of the Key Largo woodrat and cotton mouse, the Service believes that a prompt determination of endangered status is essential. An emergency listing of both species as endangered was published in the *Federal Register* on September 21, 1983 (48 FR 43040-43043), but expired on May 18, 1984. A permanent final determination of endangered status is now necessary to restore the appropriate legal classifications, to provide the protection of the Act, and to maintain the effectiveness of a relevant biological opinion issued by the Service pursuant to section 7. This opinion is that a loan by the Rural Electrification Administration (REA), for the financing of increased electrical delivery on north Key Largo by the Florida Keys Electric Cooperative (FKEC) would result in development that would jeopardize the survival of the two species. If the Key Largo woodrat and cotton mouse were only proposed, but not listed, they would be eligible only for the consideration given under the conference requirement of section 7(a)(4) of the Act, as amended. This does not require a limitation on the commitment of resources on the part of the concerned Federal agency. Therefore, in order to ensure that the full benefits of section 7 will apply to the Key Largo woodrat and cotton mouse, prompt determination of endangered status is essential. The Service is, however, currently performing the economic and other impact analyses required for a determination of critical habitat for the two species, and does plan to make such a determination in the near future.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened pursuant to the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal in *Federal Register* of June 29, 1983, 48 FR 29990). Section 7 requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species. If a Federal action may affect a listed species or critical habitat, the responsible Federal agency must enter into consultation with the Service.

On June 27, 1983, the Service entered into formal section 7 consultation with REA concerning financing of an electric substation and system expansion by the FKEC. The system expansion would potentially allow about 6,000 more electric drops in the north Key Largo area. The Key Largo woodrat and cotton mouse were listed by an emergency rule on September 21, 1983, to allow them to be considered in the consultation, which also dealt with the federally endangered American crocodile and the federally threatened Schaus swallowtail butterfly. On October 27, 1983, the Service's Regional Director in Atlanta, Georgia, issued a biological opinion concerning the American crocodile, the Schaus swallowtail butterfly, and the Key Largo woodrat and cotton mouse. The opinion indicated that the construction of the substation would not jeopardize any listed species, but expansion of the electric delivery capability would facilitate development that would jeopardize the continued survival of the Key Largo woodrat and cotton mouse. The REA has not yet responded to the Service's findings and recommendations in the October 27, biological opinion.

Restoration of protection for these species pursuant to section 7 of the Endangered Species Act will assure that they are considered in REA's formulation of loan conditions relating to increased electrical delivery on north Key Largo.

A previous Service consultation pursuant to section 7 of the Endangered Species Act occurred in relation to the Farmers Home Administration (FmHA) funding of the Florida Keys Aqueduct Authority's new aqueduct in the Florida Keys. The Service's concern was that the new pipeline would facilitate development, thereby adversely affecting listed species. FmHA entered into consultation with the Fish and Wildlife Service on February 4, 1980. The consultation involved one endangered species, the American crocodile, and one threatened species, the Schaus swallowtail butterfly, on north Key Largo. A biological opinion issued by the Service on May 29, 1980, indicated that these species would be jeopardized by the project. FmHA agreed to condition its loan to restrict water delivery on north Key Largo, thus avoiding a violation of section 7(a)(2) of the Endangered Species Act. The areas thus excluded from water delivery were within the proposed boundaries of the Crocodile Lake National Wildlife Refuge as well as uplands of several sections of land east of the refuge. About 45 percent of the total Key Largo woodrat and cotton mouse population on north Key Largo occurs in hammocks as a result of the existing biological opinion. Much of the densely occupied habitat, however, lies outside these areas. Since the FmHA is not involved with the construction and operation of the pipeline, no future Federal involvement with this project is anticipated. Because of the high-cost nature of housing development anticipated for north Key Largo, other Federal subsidies are not likely in this area.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered animal species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Literature Cited

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Author

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Section 17.11(h) is amended by adding the following two entries, in alphabetical order, to the List of Endangered and Threatened Wildlife under "MAMMALS:"

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Mammals							
Mouse, Key Largo cotton.....	<i>Peromyscus gossypinus allapaticola</i>	U.S.A. (FL).....	Entire.....	E	131E, 160	NA	NA
Woodrat, Key Largo.....	<i>Neotoma floridana smalli</i>	U.S.A. (FL).....	Entire.....	E	131E, 160	NA	NA

Dated: August 7, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wild.
Parks.

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